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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,484

02/07/2006

Hironobu Iwashita

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8776

1933 7590 12/24/2008

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EXAMINER

TADESSE, YEWEBDAR T

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

12/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,484	Applicant(s) IWASHITA ET AL.	
	Examiner YEWEBDAR T. TADESSE	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 2-15, 19-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/06, 2/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I in the reply filed on 11/11/2008 is acknowledged.
2. Claims 2-15, 19-55 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/11/2008.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Morozov et al (US 6,350,609).

Morozov et al discloses (see Figs 24 and 32 A and column 23, lines 29-37) a liquid ejection apparatus comprising a liquid ejection head having a nozzle (52) with a tip (see Fig 2); a substrate including insulating material (see column 13, 44-48); an electrode (50); a voltage applying device (power supply) and an ejection atmosphere adjusting unit (humidity controller 505) capable of controlling the dew point of the ejection atmosphere, the dew point is capable of being 9 degree centigrade or more and less than a water saturation temperature.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1 and 16-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuba et al (US 2005/0001868) in view of Takemoto et al (US 6,120,122).

With respect to claim 1, Matsuba et al discloses (see Figs 1-3) a liquid ejection apparatus comprising a liquid ejection head having a nozzle (116) with a tip portion (see Fig 2); a substrate (paper 142) an electrode; a voltage applied to the piezoelectric element of the inkjet head (see paragraphs 90 and 94) and an ejection atmosphere adjusting unit (dew point control unit 123) for controlling the dew point of the ejection

Art Unit: 1792

atmosphere, the dew point capable of being 9 degree centigrade or more and less than a water saturation temperature. Matsuba et al lacks specifically teaching a voltage applying unit for applying a voltage to the ejection electrode. However, a voltage applying device for applying voltage to electrodes of an inkjet device is well known in the art; for instance as shown by Takemoto et al (see Fig 1A and 2 for the power supply 201 applying voltage to the electrodes of the inkjet device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a voltage applying unit in Matsuba et al to eject the liquid material onto the substrate.

As to claims 16-18, Matsuba et al lacks teaching the specific inner diameter of the nozzle. It would have been an obvious matter of design choice to have the claimed inner diameter in Matsuba et al, since such a modification would have involved a mere change in the size of a component. A change of size is generally recognized as being within the ordinary level of skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

8. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morozov et al (US 6,350,609).

In Morozov et al the nozzle (capillary) is capable of having the claimed diameter (see column 11, lines 64-65 for a capillary having diameter of 20-30 microns). In any event, it would have been an obvious matter of design choice to have the claimed inner diameter in Morozov et al, since such a modification would have involved a mere change in the size of a component. A change of size is generally recognized as being within the ordinary level of skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YEWEBDAR T. TADESSE whose telephone number is (571)272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yewebdar T Tadesse/
Primary Examiner, Art Unit 1792